IFWO

RAW SEQUENCE LISTING    . DATE: 09/28/2004
PATENT APPLICATION:  US/10/828,815  TIME: 09:58:31

Input Set : A:\00742.062004.txt
Output Set: N:\CRF4\09282004\J828815.raw

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 4 <110> APPLICANT: Benjamin, Thomas L.
 6 <120> TITLE OF INVENTION: Diagnosing and Treating Cancer Cells
 7       Using Mutant Viruses
 9 <130> FILE REFERENCE: 00742/062004
11 <140> CURRENT APPLICATION NUMBER: 10/828,815
12 <141> CURRENT FILING DATE: 2004-04-21
14 <150> PRIOR APPLICATION NUMBER: 10/765,520
15 <151> PRIOR FILING DATE: 2004-01-27
17 <150> PRIOR APPLICATION NUMBER: 10/316,532
18 <151> PRIOR FILING DATE: 2002-12-10
20 <150> PRIOR APPLICATION NUMBER: 09/812,471
21 <151> PRIOR FILING DATE: 2001-03-19
23 <150> PRIOR APPLICATION NUMBER: 09/988,117
24 <151> PRIOR FILING DATE: 2001-11-16
26 <150> PRIOR APPLICATION NUMBER: 60/339,140
27 <151> PRIOR FILING DATE: 2001-12-10
29 <150> PRIOR APPLICATION NUMBER: 09/812,633
30 <151> PRIOR FILING DATE: 2001-03-19
32 <150> PRIOR APPLICATION NUMBER: 60/216,723
33 <151> PRIOR FILING DATE: 2000-07-07
35 <160> NUMBER OF SEQ ID NOS: 53
37 <170> SOFTWARE: FastSEQ for Windows Version 4.0
39 <210> SEQ ID NO: 1
40 <211> LENGTH: 1005
41 <212> TYPE: PRT
42 <213> ORGANISM: Homo Sapiens
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48          20                  25                  30
49 Val Cys Ala Lys Cys Cys Ala Gln Phe Thr Asp Pro Thr Glu Phe Leu
50          35                  40                  45
51 Ala His Gln Asn Ala Cys Ser Thr Asp Pro Pro Val Met Val Ile Ile
52      50                  55.                 60
53 Gly Gly Gln Glu Asn Pro Asn Asn Ser Ser Ala Ser Ser Glu Pro Arg
54 65                  70                  75                  80
55 Pro Glu Gly His Asn Asn Pro Gln Val Met Asp Thr Glu His Ser Asn
56                  85                  90                  95
57 Pro Pro Asp Ser Gly Ser Ser Val Pro Thr Asp Pro Thr Trp Gly Pro
58                  100                 105                 110
59 Glu Arg Arg Gly Glu Glu Ser Ser Gly His Phe Leu Val Ala Ala Thr
60          115                 120                 125
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ENTERED

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62      130             135             140
63  Leu Gly Ala Thr Pro Leu Pro Pro Glu Ser Thr Pro Ala Pro Pro Pro
64  145             150             155             160
65  Pro Pro Pro Pro Pro Pro Pro Pro Gly Val Gly Ser Gly His Leu Asn
66              165             170             175
67  Ile Pro Leu Ile Leu Glu Glu Leu Arg Val Leu Gln Gln Arg Gln Ile
68              180             185             190
69  His Gln Met Gln Met Thr Glu Gln Ile Cys Arg Gln Val Leu Leu Leu
70          195             200             205
71  Gly Ser Leu Gly Gln Thr Val Gly Ala Pro Ala Ser Pro Ser Glu Leu
72      210             215             220
73  Pro Gly Thr Gly Thr Ala Ser Ser Thr Lys Pro Leu Leu Pro Leu Phe
74  225             230             235             240
75  Ser Pro Ile Lys Pro Val Gln Thr Ser Lys Thr Leu Ala Ser Ser Ser
76              245             250             255
77  Ser Ser Ser Ser Ser Ser Ser Gly Ala Glu Thr Pro Lys Gln Ala Phe
78              260             265             270
79  Phe His Leu Tyr His Pro Leu Gly Ser Gln His Pro Phe Ser Ala Gly
80          275             280             285
81  Gly Val Gly Arg Ser His Lys Pro Thr Pro Ala Pro Ser Pro Ala Leu
82      290             295             300
83  Pro Gly Ser Thr Asp Gln Leu Ile Ala Ser Pro His Leu Ala Phe Pro
84  305             310             315             320
85  Ser Thr Thr Gly Leu Leu Ala Ala Gln Cys Leu Gly Ala Ala Arg Gly
86              325             330             335
87  Leu Glu Ala Thr Ala Ser Pro Gly Leu Leu Lys Pro Lys Asn Gly Ser
88              340             345             350
89  Gly Glu Leu Ser Tyr Gly Glu Val Met Gly Pro Leu Glu Lys Pro Gly
90          355             360             365
91  Gly Arg His Lys Cys Arg Phe Cys Ala Lys Val Phe Gly Ser Asp Ser
92      370             375             380
93  Ala Leu Gln Ile His Leu Arg Ser His Thr Gly Glu Arg Pro Tyr Lys
94  385             390             395             400
95  Cys Asn Val Cys Gly Asn Arg Phe Thr Thr Arg Gly Asn Leu Lys Val
96              405             410             415
97  His Phe His Arg His Arg Glu Lys Tyr Pro His Val Gln Met Asn Pro
98              420             425             430
99  His Pro Val Pro Glu His Leu Asp Tyr Val Ile Thr Ser Ser Gly Leu
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101 Pro Tyr Gly Met Ser Val Pro Pro Glu Lys Ala Glu Glu Glu Ala Ala
102     450             455             460
103 Thr Pro Gly Gly Gly Val Glu Arg Lys Pro Leu Val Ala Ser Thr Thr
104 465             470             475             480
105 Ala Leu Ser Ala Thr Glu Ser Leu Thr Leu Leu Ser Thr Ser Ala Gly
106             485             490             495
107 Thr Ala Thr Ala Pro Gly Leu Pro Ala Phe Asn Lys Phe Val Leu Met
108             500             505             510
109 Lys Ala Val Glu Pro Lys Asn Lys Ala Asp Glu Asn Thr Pro Pro Gly
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111 Ser Glu Gly Ser Ala Ile Ser Gly Val Ala Glu Ser Ser Thr Ala Thr
112     530                 535                 540
113 Leu Met Gln Leu Ser Lys Leu Met Thr Ser Leu Pro Ser Trp Ala Leu
114 545                 550                 555                 560
115 Leu Thr Asn His Phe Lys Ser Thr Gly Ser Phe Pro Leu Pro Leu Cys
116                 565                 570                 575 .
117 Ala Arg Ala Leu Gly Ala Ser Pro Ser Glu Thr Ser Lys Leu Gln Gln
118             580                 585                 590
119 Leu Val Glu Lys Ile Asp Arg Gln Gly Ala Val Ala Val Thr Ser Ala
120         595                 600                 605
121 Ala Ser Gly Ala Pro Thr Thr Ser Ala Pro Ala Pro Ser Ser Ser Ala
122     610                 615                 620
123 Ser Ser Gly Pro Asn Gln Cys Val Ile Cys Leu Arg Val Leu Ser Cys
124 625                 630                 635                 640
125 Pro Arg Ala Leu Arg Leu His Tyr Gly Gln His Gly Gly Glu Arg Pro
126             645                 650                 655
127 Phe Lys Cys Lys Val Cys Gly Arg Ala Phe Ser Thr Arg Gly Asn Leu
128             660                 665                 670
129 Arg Ala His Phe Val Gly His Lys Ala Ser Pro Ala Ala Arg Ala Gln
130         675                 680                 685
131 Asn Ser Cys Pro Ile Cys Gln Lys Lys Phe Thr Asn Ala Val Thr Leu
132     690                 695                 700
133 Gln Gln His Val Arg Met His Leu Gly Gly Gln Ile Pro Asn Gly Gly
134 705             . 710                 715                 720
135 Thr Ala Leu Pro Glu Gly Gly Gly Ala Ala Gln Glu Asn Gly Ser Glu
136             . 725                 730                 735
137 Gln Ser Thr Val Ser Gly Ala Gly Ser Phe Pro Gln Gln Gln Ser Gln
138             740                 745                 750
139 Gln Pro Ser Pro Glu Glu Glu Leu Ser Glu Glu Glu Glu Glu Glu Asp
140         755                 760                 765
141 Glu Glu Glu Glu Glu Asp Val Thr Asp Glu Asp Ser Leu Ala Gly Arg
142     770                 775                 780
143 Gly Ser Glu Ser Gly Gly Glu Lys Ala Ile Ser Val Arg Gly Asp Ser
144 785                 790                 795                 800
145 Glu Glu Ala Ser Gly Ala Glu Glu Glu Val Gly Thr Val Ala Ala Ala
146             805                 810                 815
147 Ala Thr Ala Gly Lys Glu Met Asp Ser Asn Glu Lys Thr Thr Gln Gln
148             820                 825                 830
149 Ser Ser Leu Pro Pro Pro Pro Pro Asp Ser Leu Asp Gln Pro Gln
150         835                 840                 845
151 Pro Met Glu Gln Gly Ser Ser Gly Val Leu Gly Gly Lys Glu Glu Gly
152     850                 855                 860
153 Gly Lys Pro Glu Arg Ser Ser Ser Pro Ala Ser Ala Leu Thr Pro Glu
154 865                 870                 875                 880
155 Gly Glu Ala Thr Ser Val Thr Leu Val Glu Glu Leu Ser Leu Gln Glu
156             885                 890                 895
157 Ala Met Arg Lys Glu Pro Gly Glu Ser Ser Ser Arg Lys Ala Cys Glu
158         900                 905                 910
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159 Val Cys Gly Gln Ala Phe Pro Ser Gln Ala Ala Leu Glu Glu His Gln
160         915                 920                 925
161 Lys Thr His Pro Lys Glu Gly Pro Leu Phe Thr Cys Val Phe Cys Arg
162         930                 935                 940
163 Gln Gly Phe Leu Glu Arg Ala Thr Leu Lys Lys His Met Leu Leu Ala
164 945                 950                 955                 960
165 His His Gln Val Gln Pro Phe Ala Pro His Gly Pro Gln Asn Ile Ala
166                 965                 970                 975
167 Ala Leu Ser Leu Val Pro Gly Cys Ser Pro Ser Ile Thr Ser Thr Gly
168             980                 985                 990
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176 <213> ORGANISM: Homo sapiens
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181 tactaggtta ggaagctctg gagcctacag cttgaggaga agccatcgtt caagtcagtc 180
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**VERIFICATION SUMMARY**                    DATE: 09/28/2004
PATENT APPLICATION:  **US/10/828,815**      TIME: 09:58:32

Input Set : **A:\00742.062004.txt**
Output Set: **N:\CRF4\09282004\J828815.raw**